

Application Nos. HEI-5-247947 filed October 4, 1993 and HEI-5-261186 filed October 19, 1993.

In response to the rejection of the original declaration for failing to state that "all errors being corrected in the reissue application up to the time of filing of the Declaration arose without any deceptive intention on the part of Applicant," the substitute declaration includes the requested wording at paragraph 8 therein.

In response to the rejection of the Declaration for failing to state "the original patent to be wholly or partly inoperative or invalid," the supplemental Declaration states, at paragraph 6 therein, "on information and belief, the '308 patent is partly inoperative or invalid by reason of the patentee claiming more or less than the patentee had the right to declare in the patent."

With respect to the objection to the Declaration for failing to specify "how and when such errors arose or occurred, and when they were discovered," Applicant respectfully submits that no such explanations are required.

The "at least one error" which is relied upon to support the reissue application must be set forth in the Oath/Declaration. It is not necessary, however, to point out how (or when) the error arose or occurred. Further, it is not necessary to point out how (or when) the error was discovered.

M.P.E.P. § 1414(II) (revised February 1, 2000) (emphasis in original).

Applicants therefore submit that since there is no such requirement that an Applicant must specify how and when errors arose and when they were discovered, the present objections to the Declaration is moot.

In response to the rejection of the Declaration for failing to state how the reissue overcomes the defects of the patent, Applicants respectfully direct the Examiner to the last three lines of paragraph 7 of the Supplemental Declaration which reads "[t]he inclusion of reissue Claim 27 overcomes the error noted above by claiming subject matter we had the right to claim originally, but which was erroneously omitted during the prosecution of the '308 patent."

In response to the indication that a supplemental declaration must be filed in light of the Supplemental Amendment filed September 12, 2000, Applicant has filed the Supplemental Declaration filed herewith which includes, in paragraph 3 therein, a Declaration by the Inventors that "[w]e have reviewed and understand the contents of the

specification (including the claims) of the present reissue application (Serial No. 09/474,867, filed December 29, 1999), the Preliminary Amendment filed September 6, 2000, and the Amendment filed herewith in response to the Office Action dated October 6, 2000.

No New Matter Has Been Entered

Claims 27-47 stand rejected under 35 U.S.C. § 251 as being based on new matter, additionally, the drawings stand objected to under 37 C.F.R. § 1.83(a), for failing to show every feature of the invention specified in the claims. However, Applicants respectfully traverse the present rejection and objection.

With respect to the indication that Claim 27 adds new matter by reciting "the exhaust system including an expansion chamber having an upstream and downstream ends and having a divergent portion at the upstream end," as well as the recitation in Claim 47 that "the expansion chamber includes a converging portion at the downstream end," Applicants submit that Figure 8, in light of what one of ordinary skill in the art knew at the time of the invention, fully discloses the subject matter at issue. For example, as shown in the upper portion of Figure 8, the expansion chamber 109 has upstream and downstream ends along the direction of exhaust gas flow therethrough. Although the upstream end is not labeled with a numeral, the portion of the expansion chamber 109 upstream from the arrow extending from the numeral "109" shown in Figure 8 is conical in shape wherein the inner walls of the upstream end diverge away from each other such that the cross section of the expansion chamber 109 grows in the downstream direction. Additionally, in the portion of the expansion chamber 109 downstream from the arrow extending from the numeral "109" in Figure 8, the walls of the expansion chamber 109 converge toward each other such that the expansion chamber 109 shrinks in the downstream direction.

Applicants submit that it has long been well known in the art that expansion chambers for two-cycle engines include a diverging portion at their upstream end and a converging portion at their downstream end. In support of this assertion, Applicants have submitted herewith Exhibits 1 and 2 which illustrate known constructions of expansion chambers for two-stroke engines. For example, as described and illustrated at pages 371, 372 of DESIGN AND SIMULATION OF TWO-STROKE ENGINES, Gordon E. Blair (1996) attached as Exhibit 1, the first few sections of a typical twin exhaust system for two-stroke

engine leading to a maximum diameter D4 (Figure 5.7 on page 372) are tapered to give maximum reflective behavior to induce expansion waves.

Also attached is pages 28 and 29 of SPLASH, Vol. 11, No. 6, June 1998 (attached as Exhibit 2) which illustrates the expansion chamber of a two-stroke exhaust system. As shown on page 29 of the SPLASH article, the exhaust system illustrated includes a "diffuser cone" 3 at the upstream end of the expansion chamber 4. The downstream end of the expansion chamber 4 includes a "convergent cone" 5. Applicant therefore submits that, in light of the illustration of the expansion chamber 109 set forth in Figure 8, one of ordinary skill in the art would recognize that the expansion chamber 109 is generally the same type of expansion chamber illustrated in Exhibits 1 and 2. Applicants have used the term "diverging portion" and "converging portion" merely to indicate that the type of expansion chamber recited in the claims is the type illustrated in Figure 8. Additionally, Applicants submit that the use of the terms diverging portion and converging portion, accurately reflect the shape of the upstream and downstream portion of the expansion chamber, respectively, as illustrated in Figure 8. Applicants therefore submit that the recitation of diverging portion in Claim 27 and converging portion in Claim 47 are fully supported by Figure 8. However, if the Examiner believes that another term would be more appropriate, Applicants urge the Examiner to call the undersigned so that acceptable terms can be agreed upon.

With respect to the rejection of Claim 43 based on the recitation that the expansion chamber is "inclined with respect to a horizontal plane," Applicants have amended Claim 43 to recite "wherein the expansion chamber is inclined with respect to the output shaft such that the upstream is higher than the downstream end." In support of the amendments to Claim 43, Applicants respectfully direct the Examiner to Figures 5, 7, and 8 where it is clear that the expansion chamber 109 is inclined with respect to the output shaft 24 disposed within the engine 23. Applicants therefore submit that amended Claim 43 is fully supported by the specification as originally filed, and thus, no new matter has been entered.

With respect to the objections to the specification for failing to provide proper antecedent basis for the claimed subject matter, Applicants have amended the specification, as set forth in the attached separate page, and provide literal antecedent basis for Claims 1, 47, and amended Claim 43.

All Claims Now Fully Comply With 35 U.S.C. § 112 (Second Paragraph)

Claims 1-23 stand rejected under 35 U.S.C. § 112, second paragraph, the Examiner maintaining that the language therein is indefinite as filed. In response to the present rejection, Applicants have amended Claim 1, solely to clarify the intended meaning, and not to narrow the scope of the claims. In particular, Applicants have amended Claim 1 to delete the phrase "and for a watercraft." Applicant therefore submits that Claim 1 now fully complies with 35 U.S.C. § 112, second paragraph.

CONCLUSION

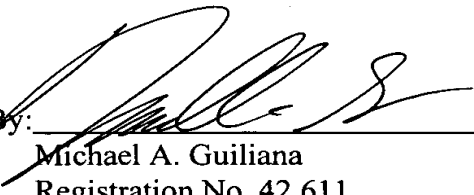
For the foregoing reasons, it is respectfully submitted that the rejections set forth in the outstanding Office Action are inapplicable to the present claims and specification. Accordingly, early issuance of a Notice of Allowance is most earnestly solicited.

The undersigned has made a good faith effort to respond to all of the rejections in the case and to place the claims in condition for immediate allowance. Nevertheless, if any undeveloped issues remain or if any issues require clarification, the Examiner is respectfully requested to call Applicants' attorney in order to resolve such issue promptly.

Respectfully submitted,

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Dated: 4/6/01

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